

A sub-band dividing unit divides an input signal into a plurality of frequency bands, and outputs a plurality of sub-band signals. A scaling unit calculates a scaling factor related to a reference value for each of the sub-band signals, and uniformly adjusts the dynamic range thereof. An auditory-sense-analysis bit allocating unit performs weighting conforming to an equal-loudness curve for each of the sub-band signals, and then calculates the amount of bit allocation to equalize a weighted quantization error in the individual sub-band signals. A quantization unit performs quantization calculations. A bitstream generating unit generates a bitstream together with header information and auxiliary information.